

Abstract

Method for partitioning video data into a base layer and at least one enhancement layer entailing receiving video data, determining DCT coefficients for a plurality of blocks of a video frame to form the base layer and the at least one enhancement layer and for each block, quantizing the DCT coefficients, converting the quantized DCT coefficients of the base layer into a set of (run, length) pairs, and determining which pairs lie on a convex hull. Thereafter rate-distortion optimal partitioning points are determined from only those pairs which lie on the convex hull in a causally optimal way. The (run, length) pairs before and inclusive of the partitioning point are encoded in the base layer while the other (run, length) pairs are encoded in the enhancement layer(s). A video encoder (22) and decoder (28) applying the method are also disclosed.